

Patent Claims

1. Device for conversion of a rotational movement into  
a movement of a working lever (3, 4; 203, 204; 303, 304; 503,  
5 504; 603, 604) defining a truncated cone or a cylinder and a  
self-rotating movement of the working lever (3, 4; 203, 204;  
303, 304; 503, 504; 603, 604), or vice versa a movement of a  
working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504;  
10 603, 604) defining a truncated cone or a cylinder and a self-  
rotating movement of the working lever (3, 4; 103, 104; 203,  
204; 303, 304; 503, 504; 603, 604) into a rotational  
movement, with a lever bearing element (2; 502; 602) which is  
rotatable around a rotation axis (C; C') and in which the  
working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504;  
15 603, 604) is self-rotatably positioned around a self-rotation  
axis (A, B; A', B'), characterised in that around the  
rotation axis (C; C') a sun wheel (7; 107, 108; 407; 507;  
607) is arranged which is able to be blocked from turning,  
with which a planetary wheel (5, 6; 105, 106; 402, 404; 505,  
20 506; 605, 606), arranged in a non-rotatable manner on the  
working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504;  
603, 604), is coupled via a transmission means (50, 55; 150,  
155; 450; 455; 550, 555; 650, 655), such that with a rotation  
of the lever bearing element (2; 502; 602) around the  
25 rotation axis (C; C'), on the one hand, due to the  
positioning in the lever bearing element (2; 502; 602), the  
working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504;  
603, 604) carries out a rotation in the same direction of  
rotation and, on the other hand, due to the planetary wheel  
30 (5, 6; 105, 106; 402, 404; 505, 506; 605, 606) which is  
coupled to the sun wheel (7; 107, 108; 407; 507; 607) via the

transmission means (50, 55; 150, 155; 450; 455; 550, 555; 650, 655), the working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504; 603, 604) carries out a self-rotation around the self-rotation axis (A, B; A', B') in the opposite  
5 direction of rotation.

2. Device according to claim 1, characterised in that a rotation-transmission ratio exists between planetary wheel (5, 6; 105, 106; 402, 404; 505, 506; 605, 606) and sun wheel (7; 107, 108; 407; 507; 607), such that with a rotation of the lever bearing element (2; 502; 602) around 360°, the working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504; 603, 604) self-rotates around less than 360°.  
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15 3. Device according to claim 2, characterised in that a rotation-transmission ratio of 2:1 exists between planetary wheel (5, 6; 105, 106; 402, 404; 505; 606) and sun wheel (7; 107, 108; 407; 507; 607).

20 4. Device according to any one of claims 1 to 3, characterised in that it has means (11, 12, 13, 14; 111, 112, 113, 114, 121, 122) with which the sun wheel (7; 107, 108; 407; 507; 607) is rotationally adjustable and which, except when rotationally adjusting, block the sun wheel from  
25 turning.

5. Device according to claim 4, characterised in that these means comprise a chain wheel (11; 111, 112) connected with the sun wheel (7; 107, 108; 407; 507; 607), a further, 30 rotationally adjustable chain wheel (13; 113, 114) and a chain (12; 121, 122) connecting the two chain wheels (11, 13; 111, 112, 113, 114).

6. Device according to any one of claims 1 to 5,  
characterised in that the planetary wheel (5, 6; 105, 106;  
505, 506; 605, 606), the transmission means (50, 55; 150,  
5 155; 550, 555; 650, 655) and the sun wheel (7; 107, 108; 507;  
607) are toothed wheels.

7. Device according to any one of claims 1 to 5,  
characterised in that the planetary wheel (402, 404) and the  
10 sun wheel (407) are chain wheels and the transmission means  
is a roller chain (450, 455) connecting the chain wheels.

8. Device according to any one of claims 1 to 5,  
characterised in that the transmission means is a belt or a  
15 toothless wheel.

9. Device according to any one of claims 1 to 8,  
characterised in that it comprises at least two working  
levers (3, 4; 103, 104; 203, 204; 303, 304; 503, 504; 603,  
20 604) each with a planetary wheel (5, 6; 402, 404; 505, 506;  
605, 606), the planetary wheels (5, 6; 402, 404; 505, 506;  
605, 606) being coupled with the sun wheel (7; 407; 507; 607)  
via transmission means (50, 55; 450; 455; 550, 555; 650,  
655).  
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10. Device according to any one of claims 1 to 9,  
characterised in that it comprises at least two working  
levers each with a planetary wheel (105, 106), each planetary  
wheel (105, 106) being coupled via a transmission means (150,  
30 155) with a separate sun wheel (107, 108) arranged around the  
rotation axis (C).

11. Device according to any one of claims 1 to 10,  
characterised in that the lever bearing element (2) is  
pivotably arranged in a casing (1, 10) and is connected with  
a shaft (9) which is arranged on the rotation axis (C) and  
5 which projects out of the casing (1, 10).

12. Device according to any one of claims 1 to 11,  
characterised in that the lever bearing element (2; 502; 602)  
is connected with a motor for production of the rotational  
10 movement, and an operating tool, in particular a paddle (31,  
41; 31', 41'; 531, 541; 631, 641) a vane (131, 141), or a  
wing blade (231, 241) is arranged on the at least one working  
lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504; 603,  
604).  
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13. Device according to any one of claims 1 to 11,  
characterised in that a torque consumer is connected with the  
lever bearing element (2; 502; 602), in particular a current  
generator.  
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14. Use of at least one device according to any one of  
claims 1 to 12 as driving apparatus and/or steering of a  
locomotion means in water or in air, for production of a  
water or gas current or for mixing of flowable materials.  
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15. Use of a device according to claim 13 for current  
production through conversion of a movement produced through  
flowing water or wind of a working lever (3, 4; 103, 104;  
203, 204; 303, 304; 503, 504; 603, 604) defining a truncated  
30 cone or a cylinder, and conversion of a self-rotating  
movement produced through flowing water or wind of the  
working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504;

603, 604), into a rotational movement, with which a current generator is operated, the working lever (3, 4; 103, 104; 203, 204; 303, 304; 503, 504; 603, 604) having an operating tool (31, 41; 31', 41'; 131, 141; 231, 241; 531, 541; 631,  
5 641).